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## TRENDS AND DEVELOPMENTS

## FOREIGN TECHNOLOGY WEAPONS AND SYSTEMS

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SCIENCES AND TECHNOLOGIESTrends in Soviet PsychologyIntroduction

(S) The Soviet Union is conducting creditable and sophisticated research in the behavioral sciences and has been doing so for the past 10 to 15 years. The main areas of emphasis are in the fields of psychopharmacology, psychobiology, parapsychology and human factors. During this period there has been a significant shift towards a multidisciplinary approach in their research efforts. The most obvious examples are their investigations of the synergistic effects of multiple drugs, drugs combined with physical stimuli (such as ultrasonic and electromagnetic fields), and team efforts in parapsychology by engineers, psychologists, and medical investigators. Telepathic communication and psychokinesis have potential in highly sensitive and political areas. A great deal of effort is also being expended to borrow Western ideas and expertise in this field. In psychopharmacology their research into the biochemistry of memory and emotional behavior in human subjects may produce significant breakthroughs.

(S) The Soviets major goal in the overall area of behavioral research is to make significant breakthroughs in the fields of psychopharmacology and parapsychology. Another area of significance is refining and enhancing the field of human factors. They have since recognized the problem of poor equipment design in both critical military and industrial man-machine interfaces. Politically the Soviets have little experience in dealing with noncaptive populations. Their hierarchy traditionally has dictated policy, but this approach is not effective in motivating individuals or groups. To resolve this sledgehammer approach, the newly found "social psychologists" are very busy incorporating Western ideas in the remotivation and control of alienated subgroups.

(S) In the military sphere their most significant goals are to (1) improve their man-machine interfaces, (2) find quick and easy ways to demoralize, influence or debilitate the enemy, and (3) find more effective methods

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to mold, influence and control the vast military forces politically at their disposal. A corollary effort, at a much smaller scale, is the development of more sophisticated means of surgically, chemically, or psychophysically controlling behavior in a nondebilitating or overtly detectable manner.

Discussion

(1) In the USSR, psychology is defined as the study of mental "psychic" activity viewed as a function of the brain determined by the conditions of life, reflecting objective reality, and regulating the interaction between man and his environment. It incorporates the dialectical materialist concept of the unity of the physical and the mental and the inseparability of the mind from the physiological processes of the brain, and the vital role of the mind. Man's consciousness is regarded as the product of a prolonged historical development in which a decisive role was played by man's work and by verbal communication.

(2) The results of psychological research are considered to have a theoretical and a practical significance. The scientific knowledge of the mind constitutes an important component of our understanding of the nature of man. Psychology contributes to the theory of knowledge and to the formulation of a philosophical view of the world. It shares in the scientific organization of human work and is an essential ingredient of the theory and practice of education, both as regards the acquisition of information and skills, and the development of personality.

(3) The Soviet Union is expending considerable resources on psychological research. This effort is both overt and covert and deals primarily with human factors, psychopharmacology and psychophysics. Their leading scientists are competent and are very much interested in international exposure and acquiring Western data and technology.

(4) Most military oriented research in psychopharmacology and parapsychology is being done by leading researchers in their fields, although they are somewhat isolated from the international scientific arena. Personnel include B. D. Lomov, V. Venda, N. P. Bechtereva, N. N. Konovalov, I. M. Kogan and E. Naumov. The Burdenko Institute of

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Neurosurgery (Moscow) and the Pavlov Institute of Physiology (Leningrad) are continuing psychological research along with other laboratories. These include: the Institute of Neurology (Moscow), the Institute of Neurosurgery (Leningrad), the Institute of Experimental Medicine (Leningrad), the Scientific Research Institute of Neurosurgery (Kiev), and the Institute of Experimental and Clinical Neurology (Tbilisi).

(S) The Soviets are competent and have great expertise in psychopharmacology, especially as it pertains to human subjects. Their greatest difficulties lie in experiment design, philosophical dogma, and digital computers to do the sophisticated statistical analyses. Their poorest work is in experiment designs dealing with higher order behavioral observations such as complex human learning and emotional behavior. Traditionally, most of the research in the Soviet Union has dealt with physiological measures such as myographic, galvanic, and encephelographic recording. They are also still doing research with poorly selected or very small samples and tend to use very subjective measures to describe their results.

(S) The major problems at this time limiting their effectiveness are their inability to handle their scientific information explosion and the apparent political-personal scientific suspicions that result from a highly structured party-oriented, bureaucratic hierarchy. Political infighting often results in unqualified party appointees being installed in highly sensitive and responsible positions, although much of this has seemingly been resolved by I. Lomov in the laboratories and projects he controls. Under Lomov's guidance, recent problem solving has been done in a nonpolitical pragmatic way. The main problem the Soviet Union has had in conducting psychological research is the lack of sophisticated laboratory grade equipment which includes precision physiological and neurophysiological devices. This problem is being resolved for the major research efforts by the wholesale purchase of foreign equipment, particularly from Japan, and in wholesale invitation to foreign scientists. The Soviets have abandoned their philosophy of waiting for Soviet technology to catch up to the West and are actively seeking and obtaining foreign talent and equipment necessary to complete high quality research in every facet of the behavioral sciences. Another major

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problem facing the leadership is a widening generation gap leading to potential morale and discipline problems within the military. In the past, the leadership was able to rely on the near fanatical nationalism resulting from World War II experiences such as the battles of Leningrad and Stalingrad. The concept of "Motor Russia" is not felt as strongly in the younger generation. The very real problems resulting from rapid urbanization, industrialization, increased affluence, and exposure to Western literature are being felt today. Future motivational dilemmas are being studied because the leaders are now aware that the magnitude of the problem will increase with time as the effect of greater affluence and mobility takes hold. However, the Soviet Union has the requisite expertise and motivation to produce major breakthroughs in several areas of the behavioral sciences. This has been made much more likely by an apparent total commitment to excellence in their scientific endeavors which includes purchasing whatever they need to conduct their research.

(U) Present-day psychology in the USSR is a complex and differentiated research system extending through general psychology, genetic and child psychology, psychosomatic disorders, medical psychology, psychophysiology and engineering psychology. A great deal of interest and support is being given to the various areas of psychology research, and although fragmented in the past with difficult uphill beginnings, it has reached the position where it is now considered by the Soviets as a traditional, recognized scientific endeavor. (SECRET)  
(REVW ON 19 MAR 1999--EXTENDED BY DT, RFAS 2.301.C.3)

SOURCE: U.S. Air Force Academy - Maj Val Tirman.  
For additional information, contact [REDACTED]

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